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October 14, 2009

Honorable Lawrence E. Strickling
Assistant Secretary for Communications and Information, and
Administrator, National Telecommunications and Information Administration (NTIA)
United States Department of Commerce
1401 Constitution Ave., NW
Washington, DC 20230

Re: State of Missouri Recommendations – BTOP Round 1

Dear Secretary Strickling:

In response to the National Telecommunications and Information Administration's (NTIA) request for recommendations regarding the Round One applications for BTOP funding, the State of Missouri is pleased to provide the NTIA with the following information and recommendations.

The State of Missouri faces a "digital divide" between the broadband internet services available in our urban/suburban areas and those available in our rural areas.¹ This divide presents a serious impediment to our ability to transform Missouri's economy for the 21st Century, and ensure that every Missourian – every family, every farm, every business and every school – has the tools they need to fully participate in, and compete on a level playing field with, the high-speed digital world around us. As Governor, I have committed to making high speed broadband services available to 95% of all Missourians in 5 years.

The recommendations we offer today in the Middle Mile and Last Mile categories are the result of a unique public-private partnership process, which is described below. The result of this process, and of the information shared by those who participated in it, is the firm conviction that the most significant hurdle to a truly transformational – not merely incremental – expansion of broadband access throughout rural Missouri is the absence of a state-of-the-art, and truly "open access," Middle Mile infrastructure.² The "open access" infrastructure Last Mile providers need – but lack in much of rural

¹ Mapping data on Missouri's MoBroadbandNow website clearly demonstrates this divide:
http://transform.mo.gov/broadband/map_files/Percentbroadband.pdf

² The only other possible explanation for the abysmally low broadband adoption rates throughout rural Missouri is to assert – as some of the current owners of Missouri's patchwork Middle Mile infrastructure do – that the tiny fraction of rural Missourians who now have high-speed broadband services are the only rural Missourians who want such services, and that no increase in adoption rates can be achieved by providing would-be private providers of

Missouri today – means predictable, dependable access to high-speed and high-capacity backhaul services at fair and consistent prices that are not subject to the caprice of a single-source provider who may also have no desire to encourage competition. Today, such an infrastructure is either wholly absent in rural Missouri or – where it exists at all – is made up of dated and underperforming technologies, and/or is solely owned by private interests with no motive to make this infrastructure available to would-be Last Mile providers and potential competitors. The development of a truly “open access” infrastructure – built on a state-of-the-art fiber optic backbone – will create the stable, fair and predictable conditions necessary to encourage potential Last Mile providers who, today, cannot gamble on gaining (and keeping) access to the existing, monopolized infrastructure.

Therefore, the State of Missouri has created an ambitious and forward-looking partnership with Middle Mile applicant Sho-Me Technologies, LLC (complemented by the Middle Mile application of Boycom Cablevision, Inc.) that will provide the “open access” infrastructure needed to give Missouri’s rural citizens and businesses a real opportunity to be at the forefront of the Nation’s broadband future, and to prove the viability of an innovative model that can be adopted elsewhere.

This MoBroadbandNow Middle Mile network – which calls for the deployment of 2,500 miles of new fiber optic backbone, the construction of 200 new towers, and the installation of state-of-the-art electronics and equipment – will be fully “open access” and therefore will facilitate the development of broadband service competition at both the Last Mile (retail) and wholesale levels. Moreover, and perhaps most important from the NTIA’s perspective, the MoBroadbandNow / Sho-Me Technologies Middle Mile network will be sustainable on the basis of connecting electrical substations alone: ***It does not depend on Last Mile service provider revenue for its sustainability or its success.***

Introduction to MoBroadbandNow:

Like all consumer transactions, broadband in Missouri depends on a willing buyer and a willing seller. There is no shortage of willing buyers. Demand for broadband services is high throughout the state, in rural and urban areas alike. But, adoption rates show a clear urban/rural “divide.”³ Is this because rural Missourians neither want nor need broadband? Of course not. Missouri’s family farmers understand the importance of connectivity and are becoming increasingly dependent on timely access to information in order to compete and succeed every bit as much as those small businesses in the

Last Mile services access to Middle Mile services on an “open access” basis. We have rejected these conclusions as both self-evidently wrong and plainly self-serving.

³ Though the MoBroadbandNow solution to Missouri’s “digital divide” is new, the existence of this divide has been the focus of considerable governmental attention in Missouri in recent years. A study completed by the Missouri Public Service Commission in 2007 outlined the challenges faced by Missouri in achieving consistent broadband coverage across the state. See <http://psc.mo.gov/the-commissioners/robert-m-clayton-iii-documents/FINAL%20Broadband%20Report%20Sept%2018%20350pm.pdf>. Also in 2007, a Rural High-Speed Internet Task Force again verified Missouri’s “digital divide” and focused on the unmet needs in rural Missouri. See <http://www.ltgov.mo.gov/ruralhsi/pdf/RHSIATPreliminaryReport2-1-08.pdf>. Neither effort, however, resulted in the public-private effort, and sizable commitment of state resources, that the BTOP and BIP Broadband Grant availability has generated.

broadband-rich urban areas of our state. But, Missouri farm broadband adoption rates reflect a lack of access.⁴ Similarly, Missourians teaching in our rural schools – and the students they serve – are every bit as aware of the benefits of broadband access as their urban counterparts who actually have such access. Finally, there is a strong correlation between broadband adoption and the income levels of potential customers.⁵ High-speed connectivity in rural areas must be affordable for businesses and families alike, or Missouri and Missourians will never see the economic development or job improvement opportunities that statewide broadband availability can bring.

MoBroadbandNow will bridge Missouri's urban/rural "digital divide." By ensuring an open-access infrastructure, MoBroadbandNow will make it feasible for private Last Mile providers to deliver high-speed internet at affordable prices to more rural Missourians than ever before, and by doing so help turn our economy around and create new jobs. MoBroadbandNow will bring choice to consumers and make it cost-effective for new private Last Mile providers to serve isolated or disadvantaged customers. The end result will be access to better services, affordability rates, and a choice of providers for Missouri's rural citizens and businesses.

MoBroadbandNow Process and BTOP Recommendations:

The first step toward achieving Missouri's "95%-in-5" rural broadband expansion goal was to solicit private businesses that shared the State's vision and would work in partnership with the State to achieve that goal. In July, when the NOFAs for the BTOP and BIP Broadband Grants were released, Missouri began a process called "MoBroadbandNow" to identify and work with private partners willing to provide these Middle Mile services on such an "open access" basis, as well as the vanguard of Last Mile providers that will take broadband services from this "open access" backbone to the doorsteps of Missouri homes, businesses and essential public facilities. The responses were evaluated in consultation with public and private partners including the University of Missouri, the Public Service Commission, rural co-ops, regional and national ISPs, and other state agencies. This process is detailed at: <http://transform.mo.gov/broadband/>.

Through this process, the State identified those partners that offered the best opportunities to secure BTOP/BIP funding and move the State's MoBroadbandNow vision forward. We worked with those applicants (two predominantly Middle Mile applicants and seven predominantly Last Mile applicants) to ensure that their applications were as strong as they could be, and these were submitted to NTIA (and the Department of Agriculture's RUS/BIP program) in August.

Therefore, at least with respect to Middle Mile and Last Mile categories, Missouri's response to the NTIA's request for recommendations today is the same as it was in August, particularly given that there

⁴ Mapping data on broadband adoption rates on Missouri farms is available at http://transform.mo.gov/broadband/wiki/index.php/File:Broadbandfarms_0509.jpg.

⁵ Compare the mapping data of broadband adoption rates, http://transform.mo.gov/broadband/map_files/Percentbroadband.pdf, with the mapping data on households at or below the federal poverty level, http://transform.mo.gov/broadband/map_files/Poverty_Level_2000_Census.pdf.

was no initial screening or winnowing of applications by NTIA as was suggested by the BTOP guidance. Missouri's recommendations in the Middle Mile and Last Mile categories are set forth below. In addition, we have reviewed the summary information provided by the NTIA regarding applications from Missouri entities seeking grants in the "Public Computing Centers" and "Sustainable Broadband Adoption" categories, and have recommended below those which, on the basis of the available information, we believe best address the BTOP requirements and Missouri's needs.

Middle-Mile Infrastructure Recommendations

(2 recommendations – combined \$26.6 million in proposed State match)

Based upon Missouri's conclusion that the primary barrier to a transformative – not merely incremental – expansion of broadband access throughout rural Missouri is the lack of an open-access, fiber-optic, Middle Mile infrastructure, Missouri strongly recommends the Sho-Me Technologies application (complemented by the Boycom Cablevision proposal) for the highest priority funding. BTOP funding in Round One for these proposals will make backhaul services available to those entities that want to provide Last Mile services in Missouri and lack only "open access" to affordable, reliable and predictable infrastructure before they can step in and begin to fill the unmet broadband needs in rural Missouri. Missouri's Last Mile applicants, both in BTOP Round One and later rounds, will present an even more compelling case for their own viability and sustainability when this MoBroadbandNow-priority infrastructure is funded.

Applicant: SHO-ME TECHNOLOGIES L.L.C.

Project Title: MoBroadbandNow Middle Mile Network

The economic viability and sustainability of this project does NOT depend on revenue from Last Mile providers – with BTOP funding, the project is sustainable solely by its contribution to local utility management, with the "open access" Middle Mile availability for the use of private Last Mile providers (and the State) merely a highly significant – but cost-neutral – by-product.

Rural electrification in Missouri was a success because of the rural cooperatives. The contemporary analogy to rural electrification is the need to make sustainable high-speed broadband connectivity available to rural families at an affordable price. Sho-Me Technologies is uniquely positioned not only to perform the engineering and construction work on time and under budget throughout our rural areas, but also to forge the partnerships and alliances necessary for success in small markets across the state. For these reasons, Missouri has partnered with Sho-Me and this unprecedented public-private partnership is the signature project among the MoBroadbandNow applications. Accordingly, Missouri strongly recommends this proposal for the highest priority funding in Round One.

The Sho-Me proposal is a shovel-ready project that will deliver approximately 2,500 miles of fiber optic connectivity and nearly 200 radio towers to 60+ rural counties throughout Missouri. These areas represent much of the State where broadband adoption rates are very low, even though there is no reason to believe demand for such services is any lower than in better-served urban and suburban areas. Therefore, Sho-Me's proposal will fill Missouri's gap in "open access" Middle Mile infrastructure

and pave the way for new Last Mile providers, increased competition for rural customers, and the lower prices that such competition (and the “open access” infrastructure it depends) will create.

Key points to the Sho-Me proposal include:

- Access to approximately 300 rural communities along the fiber path, as well as reach into additional tower locations in areas surrounding the communities
- Adds 50+ rural county seats to a fiber-connected network
- Open access fiber and towers
- Highly reliable design (network rings)
- Drop-off points for additional towns and towers along or near the fiber path
- High capacity fiber and bandwidth supply options for Last Mile providers (critical for both wired and wireless providers as bandwidth to the end-user increases)
- Puts fiber into areas where no fiber exists or fiber access is limited and not open-access
- Smartgrid enabler for Missouri rural electric cooperatives
- Provides the key portions of a statewide “open access” infrastructure that will enable low-cost access throughout rural Missouri for libraries and similar public service institutions; K-12 school districts and higher education institutions; healthcare providers and patients seeking remote healthcare services; public safety and intelligent transportation benefits.
- Based on expected use over the next seven to ten years, the reduced costs to the State for the public service benefits made available through this proposal will produce savings equal to between 200% and 300% of the State’s initial matching funds investment.

Applicant: ***BoyCom Cablevision, Inc.***

Project Title: ***Southern Missouri Broadband Project***

- The Boycom proposal – whose footprint complements, rather than duplicates, that of Sho-Me Technologies above – offers a combination of Middle Mile and Last Mile services to many un-served and under-served areas of southern Missouri. This applicant, too, has offered substantial pro bono public benefit broadband services to the state in exchange for a commitment of State matching funds.

Last-Mile Infrastructure Recommendations

(6 recommendations – combined \$1.4 million in proposed State match)

The following six⁶ Last Mile applicants went through the State’s partnering and review process described above, and emerged as the proposals best fitted to the MoBroadbandNow goals, and best positioned

⁶ There are seven (7) MoBroadbandNow partners with Last Mile applications. Socket Telecom, LLC, however, is a BIP-only applicant and is thus not included in these six (6) recommendations to the NTIA. This omission should not be mistaken as indicating any lack of support for the Socket application, nor should any inference be drawn that

to take advantage of the open-access infrastructure that would result from the two Middle Mile applications recommended above:

Applicant: *Big River Broadband, LLC*

Project Title: *Big River High Speed Internet*

The Big River proposal would provide wireless broadband service to eight rural and underserved counties in the southeastern portion of Missouri. Additionally, the project provides a significant level of job creation, a public safety wireless data service, and service to a significant number (141) of key anchor institutions. The network would be open-access and provide speeds well above the existing common broadband definitions. This applicant has offered substantial pro bono public benefit broadband services in return for a commitment of State matching funds.

Applicant: *NPG Cable, Inc.*

Project Title: *RFoG from St. Joseph MO to Grayson MO Project Number MO0164454*

The NPG project develops a fiber-to-the-home structure for approximately 800 customers around the St. Joseph, Missouri, area. These are areas of low population density, but also include anchor institutions such as health care and public safety that have need for this type of connectivity. This applicant has offered substantial pro bono public benefit broadband services in return for a commitment of State matching funds.

Applicant: *Poplar Bluff Internet, Inc.*

Project Title: *200 Percent Green SE Missouri Last Mile Wireless Project with Solar Power & Wind Turbine Smart Grid System*

This project would provide a 31 tower network over nearly 800 square miles in an un-served area of Butler County, Missouri. In addition to the rural area being served, the project offers the unique perspective of utilizing wind and solar energy sources to each capable of providing sufficient power for the equipment, thus the “200 Percent Green” project designation. This applicant has offered substantial pro bono public benefit broadband services in return for a commitment of State matching funds.

Socket is any less a part of the MoBroadbandNow vision for Missouri’s internet future than the six applications identified above merely by its absence from these recommendations.

Applicant: *Ralls County Electric Cooperative*

Project Title: *Ralls County Electric Fiber-to-the-Home Project*

This project from a non-profit rural electric cooperative would construct a Last Mile open-access network to their service area in rural northeast Missouri. Along with the broadband delivery, the system is also an enabler for SmartGrid utilization and economic development opportunities. The service area is rural, underserved, with a majority of the area unserved. Communities within the service area have identified the lack of acceptable broadband access as a significant reason for jobs decline in the area. The topography of the area makes fixed wireless a non-viable solution, and fiber offers the most potential for service to the customer. This applicant has offered substantial pro bono public benefit broadband services in return for a commitment of State matching funds.

Applicant: *GlenMartin, Inc.*

Project Title: *(multiple proposals)*

GlenMartin is offering a series of 20+ proposals to cover the rural areas of the state. The proposals would offer a combination of wireless services to deliver access to the customer location. Whereas other Last Mile applications tend to target specific regions of the state, the GlenMartin series of proposals could provide access in a number of regions not proposed by other providers.

Applicant: *Roberts-Roberts, Inc.*

Project Title: *Roberts Broadband Missouri Northeast*
Roberts Broadband Missouri North

Roberts-Roberts brings a large inventory of tower resources to its Missouri project, delivering wireless broadband services to much of rural Missouri. This proposal comes from a company with a proven track record and a broad Missouri footprint. This applicant has demonstrated a high level of ability to complete the project within the time frames required.

Public Computing Center Recommendations

(4 recommendations)

Although Missouri did not have the benefit of that applications themselves, or of the NTIA's initial review and winnowing of applications suggested in the BTOP guidance, we have identified the following four Missouri applicants whose proposals represent a geographically disperse approach to meeting the BTOP guidelines and Missouri's needs.

Applicant: Columbia Housing Authority – Columbia, MO

Project Title: Neighborhood Networks Computer Literacy Centers

This proposal puts computing centers within one city block for 75% of the residents, and within three blocks of the remaining 25%. These neighborhood centers would provide access to on-line resources for vulnerable populations who would normally lack broadband access at home. This would include educational content for children, information access (e.g., health and human services), educational opportunities, and job-training for adults.

Applicant: Springfield-Greene County Library District – Springfield MO

Project Title: Edge Community Technology Center Expansion

Demand growth has been the trend at the existing Edge Technology Center. The goal for the Edge Center has been to provide easy access and learning opportunities for those living in the most economically depressed areas of the city. The impact of the economic downturn and increased unemployment rate has driven demand for their services to new levels. In addition, the Center would like to enhance their service offerings, such as assisting small businesses and elderly tax preparation.

Applicant: The Curators of the University of Missouri – Columbia, MO

Project Title: Missouri Telecommunication Community Resource Centers

The University offers Telecommunications Community Resource Centers (TCRC) through much of rural Missouri. These Resource Centers offer a variety of on-line services such as distance learning to assist Missourians in obtaining jobs, or improving job skills to attain better jobs. The goal of this project is to enhance the technologies available within this network of locations, and improve the learning experience for the rural constituents, where broadband access at the home is unavailable or unable to provide these types of services.

Applicant: True Broadband Networks, LLC – Kansas City, MO

Project Title: True Broadband Technology Empowerment Collaborative

Deployment of new computing centers and expansion of existing centers would be the goal of this proposal. The digital divide exists not only in rural Missouri, but in urban areas as well. These centers would be located in areas of vulnerable populations, and serve to bridge the digital divide for those populations. Services included with this implementation would include training and mentoring, assistance with training and job placement, and adult education.

Sustained Broadband Adoption Recommendations

(4 recommendations)

Although Missouri did not have the benefit of that applications themselves, or of the NTIA's initial review and winnowing of applications suggested in the BTOP guidance, we have identified the following four Missouri applicants whose proposals represent a geographically disperse approach to meeting the BTOP guidelines and Missouri's needs.

Applicant: ***Columbia Housing Authority – Columbia, MO***

Project Title: ***Equal Access for All Neighborhood WirelessNetwork***

This proposal tracks the Public Computing Center proposal submitted by the same entity and recommended above.

Applicant: ***FRWB Winum, LLC – University City, MO***

Project Title: ***RRU Project***

This applicant would partner with Missouri Last Mile providers to promote low-cost services via reduced subscriber fees and differentiated services.

Applicant: ***Illuminari, LLC – O'Fallon, MO***

Project Title: ***Broadband Awareness, Demonstration, Education, Presentation, and Training Project***

This applicant's ADEPT training program purports to help stimulate sustained adoption of broadband services.

Applicant: ***Presbyterian Children's Services, Inc. – St. Louis, MO***

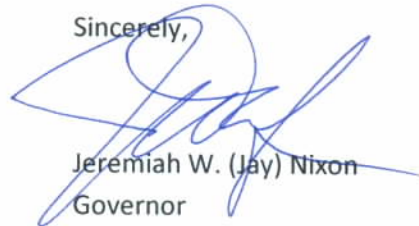
Project Title: ***Sustainable Broadband Adoption for Children in Missouri***

This applicant seeks to supply education, training, and equipment to those of would provide for vulnerable children and their families in Missouri.

Conclusion

In closing, the State of Missouri is pleased to provide the NTIA with the foregoing recommendations, including most emphatically the Middle Mile recommendation, which is the cornerstone effort for the State's MoBroadbandNow initiative. BTOP funding for this effort in Round One is essential to its success and to effecting a transformative – not merely incremental – expansion of broadband access throughout rural Missouri.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jay Nixon", is written over the printed name and title.

Jeremiah W. (Jay) Nixon
Governor

c: Ian Martinez, Senior Advisor and Director of Outreach (NTIA-BTOP)